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Declarations under Rule 4.17:

— as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

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— as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

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(54) Title: NUTRITIONAL FORMULA COMPRISING L(+) LACTIC ACID

(57) Abstract: The present invention concerns a directly acidified nutritional formula that prevents growth of pathogenic bacteria in the liquid formula even at room temperature for prolonged time. The invention further relates to a method for preparing the formula and to the use of L(+)-lactic acid for preparing nutritional formulas with a pH in the range of 3.5 to 6.

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INTERNATIONAL SEARCH REPORT

International Application No
PCT/EP 04/14400

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 A23L1/30 A23L1/29

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 A23L

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, BIOSIS, WPI Data, PAJ, FSTA, MEDLINE

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 96/31130 A (ABBOTT LAB) 10 October 1996 (1996-10-10) claims; tables 18-21, 25	1-11
A	US 4 303 692 A (GAULL GERALD E) 1 December 1981 (1981-12-01) column 8, line 40 - column 9, line 13	1-11
A	DATABASE BIOSIS 'Online! BIOSCIENCES INFORMATION SERVICE, PHILADELPHIA, PA, US; 1989, BRUNSER O ET AL: "EFFECT OF AN ACIDIFIED MILK ON DIARRHEA AND THE CARRIER STATE IN INFANTS OF LOW SOCIO-ECONOMIC STRATUM" XP002230476 Database accession no. PREV198988041353 abstract	1-11
	-/-	

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

* Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the International filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the International filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- "&" document member of the same patent family

Date of the actual completion of the International search

31 January 2005

Date of mailing of the International search report

17/02/2005

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INTERNATIONAL SEARCH REPORT

International Application No
PCT/EP 14400

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
L	<p>& ACTA PAEDIATRICA SCANDINAVICA, vol. 78, no. 2, 1989, pages 259-264, ISSN: 0001-656X -----</p> <p>ANONYMOUS: "17th International Congress of Nutrition" INTERNET ARTICLE, 'Online! XP002230474 Retrieved from the Internet: URL:http://www.univie.ac.at/iuns2001/sw_3.htm 'retrieved on 2003-02-10! paragraphs 'W.03.106!, 'W.03.109! -----</p>	1-11
L	<p>ANONYMOUS: "Lactobacillus" INTERNET ARTICLE, 'Online! XP002230475 Retrieved from the Internet: URL:http://www.flora-balance.com/lactic_acid_producing_bacteria.htm 'retrieved on 2003-02-10! the whole document -----</p>	1-11

INTERNATIONAL SEARCH REPORT

International Application No.
PCT/GB93/14400

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. Claims Nos.: because they relate to subject matter not required to be searched by this Authority, namely:
Although claim 11 is directed to a method of treatment of the human/animal body (Article 52(4) EPC), the search has been carried out and based on the alleged effects of the composition.
2. Claims Nos.: because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. Claims Nos.: because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- The additional search fees were accompanied by the applicant's protest.
- No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP 24400

Patent document cited in search report		Publication date		Patent family member(s)		Publication date
WO 9631130	A	10-10-1996	US	5597595 A		28-01-1997
			US	5698222 A		16-12-1997
			US	5609897 A		11-03-1997
			AU	715227 B2		20-01-2000
			AU	5441596 A		23-10-1996
			CA	2217264 A1		10-10-1996
			EP	0818957 A2		21-01-1998
			JP	11503023 T		23-03-1999
			NO	974540 A		08-12-1997
			NZ	306211 A		26-08-1998
			WO	9631130 A2		10-10-1996
			US	5817351 A		06-10-1998
US 4303692	A	01-12-1981		NONE		